

AMENDMENTS TO THE CLAIMS

- 1 (currently amended): A driving method of a liquid crystal display (LCD) monitor,
the LCD monitor comprising:
- 5 an LCD panel for displaying a plurality of pixels arranged in a matrix format;
a positive buffer circuit for driving the pixels with a positive
voltage;
a negative buffer circuit for driving the pixels with a negative
voltage;
- 10 a detector for receiving a horizontal synchronization signal and a
polarity signal, and for comparing states of the polarity signal at
two successive triggers of the horizontal synchronization signal;
and
- 15 a controller connected to the detector, the positive buffer circuit, and
the negative buffer circuit for controlling operation of the
~~npositive~~ positive buffer circuit and the negative buffer circuit
according to an output of the detector;
- the driving method comprising:
- 20 using the controller to control either the positive buffer circuit or the
negative buffer circuit for driving two adjacent pixels, which
are located in the same column but different rows on the LCD
panel corresponding to the two successive triggers of the
horizontal synchronization signal, with voltages of the same
polarity when the detector detects that states of the polarity
25 signal at two successive triggers of the horizontal
synchronization signal are the same so that the positive buffer
circuit continuously drives the pixels with the positive voltage
and the negative buffer circuit continuously drives the pixels
with the negative voltage; and
- 30 using the controller to control the positive buffer circuit and the
negative buffer circuit for driving two adjacent pixels, which are
located in the same column but different rows on the LCD panel

corresponding to two successive triggers of the horizontal
synchronization signal, with voltages of opposite polarities when
the detector detects that two states of the polarity signal at two
successive triggers of the horizontal synchronization signal
differ.

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2 (original): The driving method of claim 1 wherein the pixel to be driven with a
positive voltage is precharged to a predetermined positive level before being
driven, and the pixel to be driven with a negative voltage is precharged to a
predetermined negative level before being driven.

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3 (original): The driving method of claim 2 wherein the positive buffer circuit
comprises a first precharge circuit for providing the predetermined positive level,
and the negative buffer circuit comprises a second precharge circuit for providing
the predetermined negative level.

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4 (original): The driving method of claim 3 wherein the first precharge circuit and
the second precharge circuit are source followers.

5 (original): The driving method of claim 1 wherein the detector comprises two
latch circuits for holding the corresponding states of the polarity signal at two
successive triggers of the horizontal synchronization signal, and a logic circuit for
comparing two states of the polarity signal at two successive triggers of the
horizontal synchronization signal.

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6 (original): The driving method of claim 1 wherein each of the positive buffer
circuit and the negative buffer comprises a class-A operational amplifier buffer for
driving pixels.

7 (original): A liquid crystal display (LCD) monitor comprising:
an LCD panel for displaying a plurality of pixels arranged in a matrix
format;

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a positive buffer circuit for driving the pixels with a positive voltage;
a negative buffer circuit for driving the pixels with a negative voltage;
5 a detector for receiving a horizontal synchronization signal and a polarity signal, and for comparing states of the polarity signal at two successive triggers of the horizontal synchronization signal; and
a controller connected to the detector, the positive buffer circuit, and
10 the negative buffer circuit for controlling operation of the positive buffer circuit and the negative buffer circuit according to an output of the detector;
wherein the controller controls either the positive buffer circuit or the negative buffer circuit for driving two adjacent pixels, which are
15 located in the same column but different rows on the LCD panel corresponding to the two successive triggers of the horizontal synchronization signal, with voltages of the same polarity when the detector detects that states of the polarity signal at two successive triggers of the horizontal synchronization signal are the same so that
20 the positive buffer circuit continuously drives the pixels with the positive voltage and the negative buffer circuit continuously drives the pixels with the negative voltage, and the controller controls the positive buffer circuit and the negative buffer circuit for driving two adjacent pixels, which are located in the same column but different
25 rows on the LCD panel corresponding to two successive triggers of the horizontal synchronization signal, with voltages of opposite polarities when the detector detects that two states of the polarity signal at two successive triggers of the horizontal synchronization signal differ.

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8 (original): The liquid crystal display monitor of claim 7 wherein the pixel to be driven with a positive voltage is precharged to a predetermined positive level

before being driven, and the pixel to be driven with a negative voltage is precharged to a predetermined negative level before being driven.

- 9 (original): The liquid crystal display monitor of claim 8 wherein the positive
5 buffer circuit comprises a first precharge circuit for providing the predetermined positive level, and the negative buffer circuit comprises a second precharge circuit for providing the predetermined negative level.
- 10 (original): The liquid crystal display monitor of claim 9 wherein the first precharge
10 circuit and the second precharge circuit are source followers.
- 11 (original): The liquid crystal display monitor of claim 7 wherein the detector
comprises two latch circuits for holding the corresponding states of the polarity
signal at two successive triggers of the horizontal synchronization signal, and a
15 logic circuit for comparing two states of the polarity signal at two successive triggers of the horizontal synchronization signal.
- 12 (original): The liquid crystal display monitor of claim 7 wherein each of the
positive buffer circuit and the negative buffer circuit comprises a class-A
20 operational amplifier buffer for driving the pixels.
- 13 (original): A driving circuit of a liquid crystal display (LCD) monitor, the LCD
monitor comprising an LCD panel for displaying a plurality of pixels arranged in a
matrix format, the driving circuit comprising:
25 a positive buffer circuit for driving the pixels with a positive voltage;
a negative buffer circuit for driving the pixels with a negative voltage;
a detector for receiving a horizontal synchronization signal and a
30 polarity signal, the detector comprising:
two latch circuits for holding the corresponding states of the polarity signal at two successive triggers of the horizontal

synchronization signal; and
a logic circuit for comparing two states of the polarity signal at
two successive triggers of the horizontal synchronization
signal; and
5 a controller connected to the detector, the positive buffer circuit, and
the negative output buffer for controlling operation of the
positive buffer circuit and the negative buffer circuit according to
an output of the detector;
wherein the controller controls either the positive buffer circuit or
10 the negative buffer circuit for driving two adjacent pixels, which are
located in the same column but different rows on the LCD panel
corresponding to the two successive triggers of the horizontal
synchronization signal, with voltages of the same polarity when the
detector detects that states of the polarity signal at two successive
15 triggers of the horizontal synchronization signal are the same so that
the positive buffer circuit continuously drives the pixels with the
positive voltage and the negative buffer circuit continuously drives
the pixels with the negative voltage, and the controller controls the
positive buffer circuit and the negative buffer circuit for driving two
20 adjacent pixels, which are located in the same column but different
rows on the LCD panel corresponding to two successive triggers of
the horizontal synchronization signal, with voltages of opposite
polarities when the detector detects that two states of the polarity
signal at two successive triggers of the horizontal synchronization
25 signal differ.

14 (original): The driving circuit of claim 13 wherein the pixel to be driven with a
positive voltage is precharged to a predetermined positive level before being
driven, and the pixel to be driven with a negative voltage is precharged to a
30 predetermined negative level before being driven.

15 (original): The driving circuit of claim 14 wherein the positive buffer circuit

comprises a first precharge circuit for providing the predetermined positive level, and the negative buffer circuit comprises a second precharge circuit for providing the predetermined negative level.

- 5 16 (original): The driving circuit of claim 15 wherein the first precharge circuit and the second precharge circuit are source followers.

- 17 (original): The driving circuit of claim 13 wherein each of the positive buffer circuit and the negative buffer circuit comprises a class-A operational amplifier
10 buffer for driving the pixels.

18-20 (cancelled).